

SHEA TECHNICAL NOTES

The State Health Expenditure Accounts (SHEA) present information based on the health care expenditures of Maryland residents and not on expenditures associated with Maryland providers. This is in keeping with the 1993 health care reform legislation enacted by the Maryland General Assembly that focuses on the health care market faced by Maryland's residents rather than on a market defined by provider location. The Maryland Health Care Commission (MHCC) relies heavily on existing program and health care administrative data to construct the accounts. This approach enables MHCC to make use of the most consistent data available (generally audited) and minimizes redundant data collection and the associated expense. The information (as noted in explanations that follow) is derived principally from government sources. These consist of several state agencies, including the Maryland Insurance Administration (MIA), numerous administrations under the Department of Health and Mental Hygiene (DHMH), and the Department of Corrections (DOC). Federal agencies, which include the Centers for Medicare and Medicaid Services (CMS), the Office of Personnel Management (OPM), and the Bureau of the Census, provide supporting information on Medicare enrollment and expenditures, data on health insurance coverage in the United States, and estimates of federal employee enrollment in health plans.

Although the SHEA is modeled after the National Health Expenditure (NHE) accounts, the expenditures captured in the state accounts do not reflect the universe of expenditures included in the NHE. Expenses for research, facility construction, government public health activities, and industry health services are not included in the state accounts. Also, the source of funds for state accounts differs from those used in the NHE. State accounts (1) separate NHE's "private insurance" into "insurers and self-funded plans" and "HMOs," (2) omit from state and local government expenditures both hospital subsidies and workers compensation, and (3) exclude nonpatient revenues and philanthropy. The differences reflect the state's primary focus on how *personal health care expenditures*—spending on health care services provided to patients—differ from year to year and by payer source and also reflect a reliance on existing data sources.

Because information on spending by Maryland residents for various services is limited, the figures reported in the SHEA often represent estimates rather than direct measurements. This is especially true for residents with private coverage, whose claims are not processed by government sources. Estimates for services to Maryland residents reimbursed by out-of-state payers are especially difficult to derive, because these data are not captured in state sources. Such insurance arrangements occur, for example, when Maryland residents work for out-of-state firms and are covered by insurance written at the corporate headquarters. Services provided to state residents by out-of-state providers can also be difficult to estimate for the same reason. Such services occur most often for residents of counties surrounding the District of Columbia (DC), parts of northern Maryland adjacent to Pennsylvania and Delaware, and areas of Western Maryland bordering West Virginia. The SHEA methodology implements indirect adjustments to estimates in order to account for border crossing issues; however, for these reasons, it is possible that the SHEA may have less reliable estimates of spending by Maryland residents in "border counties." Estimated patient liabilities are derived from assumptions used to generate estimated out-of-pocket (OOP) spending for the NHE accounts.

It is not possible to allocate Medicare and Medicaid HMO capitation payments directly to specific provider and service categories because of limitations on the information available from and on the financial systems that support these government payers. Both Medicare and Medicaid are attempting to improve their information systems, which may enhance the information available for future reporting. For this report, the Medicare+Choice allocation across services was based on aggregate information provided by the CMS Office of the Actuary. The allocation of Medicaid HealthChoice premiums relied on estimated distributions associated with private HMO enrollees.

These caveats notwithstanding, the Commission believes that the methodology developed for the State Health Expenditure Accounts represents a robust, cost-effective, and sustainable strategy for monitoring trends in health care expenditures across the state and for providing useful answers to important policy questions relating to such trends.

METHODS AND SOURCES FOR EACH PAYER CATEGORY

The following section describes the data sources and methods used to develop Maryland's health expenditure accounts. Each data source is presented separately in the column order in which it appears on the health expenditure account tables.

Original Medicare and Medicare+Choice

In order to estimate program expenditures for original Medicare, CMS provided calendar year 2001 Medicare claims for Maryland residents. Program payments were summarized statewide and by beneficiary county of residence by aggregating the reimbursements for settled claims for the following claims files: Inpatient, Outpatient, Physician Supplier, Durable Medical Equipment, Skilled Nursing Facilities, Home Health, and Hospice. Administrative costs for original Medicare were estimated by applying the 2001 national Medicare administrative proportion for all Medicare expenditures (indemnity and managed care) based on the NHE. Medicare enrollment figures were estimated by averaging CMS quarterly Managed Care Market Penetration Reports.

Estimated expenditures under the original Medicare program were allocated directly across service categories from settled claims. The SHEA rows comprising direct allocation include the Medpar inpatient hospital (short- and long-stay, hospice), outpatient hospital, physician (all medical specialties), other professional (non-physician specialties, ambulatory surgical centers [ASC]), home health, nursing home care (SNF), and other (durable medical equipment [DME], supplies). No prescription drug data are reported here.

Medicare+Choice expenditures were developed from a combination of CMS sources, including Managed Care Market Penetration Reports and Medicare Managed Care Contract Reports. A cost per enrollee by plan type was estimated using reported national expenditures and enrollment by plan type in the Contract Reports. These per capita costs were applied to counts of Maryland Medicare managed care beneficiaries to estimate Medicare managed care expenditures in Maryland. The expenditure estimate was distributed to Maryland regions based on the regional

distribution of the Medicare managed care population and regional cost differentials captured in Medicare+Choice capitation rates. Administrative costs were estimated by averaging the administrative proportions from private HMOs in Maryland that received Medicare capitation payments from CMS in 2001. Medicare managed care enrollment figures were derived by averaging Maryland data from the quarterly Managed Care Market Penetration Reports and data provided by Maryland's Program of All Inclusive Care for the Elderly (PACE) health plan. Adjustments were made to some county-level data to correct for a limited amount of data censoring by CMS to protect confidentiality and for address inconsistencies in Medicare enrollment files. These adjustments were more pronounced in regions with sparse Medicare+Choice enrollment.

The allocation of Medicare+Choice spending across categories of service was based on statistics created by the CMS Office of the Actuary for the 1999 NHE accounts. Because these statistics did not distinguish between inpatient and outpatient hospital services, this allocation was estimated using information from the Maryland Health Services Cost Review Commission (HSCRC).

Traditional Medicaid and HealthChoice

All expenditure and enrollment data related to the Medicaid programs were provided by Maryland's Department of Health and Mental Hygiene (DHMH). Fiscal year Medicaid management information system (MMIS) claims data for 2001 and 2002 were averaged to develop estimates of traditional Medicaid expenditures for calendar year 2001. MMIS data were reported by county, so regional traditional Medicaid expenditures were calculated from county-level data. Administrative costs for the traditional Medicaid program were also provided by DHMH.

Traditional Medicaid categories of service comprising the SHEA row elements were defined directly from data received by DHMH. Inpatient hospital services include acute care, rehabilitation, specific intermediate care, and residential treatment for addictions. Outpatient hospital services include acute care, rehabilitation, and psychiatric day care. Physician services include all medical specialty services except dental. Other professional services include non-physician specialties, dental, and ambulance services. Home health care includes waivers, medical and personal day care, therapy, and private-duty nursing care. Nursing home includes long-term care, non-addiction-related intermediate care, and SNF. Other services include DME and supplies. Prescription drug data were directly obtained from DHMH.

Medicaid HealthChoice payments were taken directly from DHMH data and reflect capitation payments made to all managed care organizations (MCOs) and HMOs in 2001. Capitation payments are rate determined according to the risk category of the enrollee and do not differ by plan type. Medicaid HealthChoice spending was allocated to regions based on the county distribution of these expenditures detailed in MMIS reports. Like other capitation payments and insurance premiums, they can be divided into two parts: benefits paid and administrative expenses. Administrative costs were determined from detailed reports on the financial experience of health plans participating in HealthChoice submitted by the MCOs to DHMH. Aggregate benefits paid were allocated across categories of service using expenditure shares calculated for the private HMO population (see below).

Other Government

Total expenditures represent seven distinct government categories: DOC, CHAMPUS, Veteran's Administration (VA), state hospitals, DHMH programs (including federal grants to DHMH programs), the AIDS Insurance Assistance Program, and the Maryland Pharmacy Assistance Program. The DOC provided overall and regional payment amounts made in a specific fiscal year. Expenditures were allocated to SHEA rows based on the private indemnity distribution, with some proportional adjustments to reflect service restrictions in the DOC policy. CHAMPUS data on overall expenditures were distributed to service categories using distributions developed from a combination of sources including the Medical Care Data Base (MCDB) and the HSCRC Payer Differential Accounts for the private indemnity population. CHAMPUS expenditures were distributed to regions using the distribution of the overall state population. The VA provided state-level expenditure data by service category. Expenditures were distributed to regions based on the distribution of the VA population in the state. Maryland state budget documents were used to develop expenditures for state hospitals (inpatient/outpatient psychiatric, chronic care, nursing home, and intermediate care facilities-mental retardation [ICF-MR]), DHMH programs (including local health department contributions to these programs), and federal grants supporting DHMH programs. These expenditures were distributed to regions using the distribution of the Maryland Medicaid population. Expenditures for two programs funded entirely with state funds—the Maryland Pharmacy Assistance Program and the AIDS Insurance Assistance Program—were developed from data obtained from DHMH. Administrative expenditures were calculated for the entire Other Government column using the administrative proportion for state and local funds from CMS's 2000 NHE accounts.

Private Sector: Insurers And Self-Insured

Private indemnity direct losses incurred by Maryland Life and Health, Property and Casualty, and non-profit companies were derived from annual filings submitted to the MIA. These expenditures formed the base against which additional adjustments were made for (1) expenditures by companies that are self-insured and (2) expenditures for Maryland residents with coverage under insurance contracts written out-of-state and therefore not included in Maryland group contracts. Estimated administrative costs were added based on information that insurers reported to the MIA. The service-specific spending levels developed for this effort from the Medical Care Data Base (MCDB) and the HSCRC Payer Differential Accounts were used to allocate total expenditures to service categories. The distribution of the state's privately insured, non-HMO population was used to distribute expenditures to regions. Privately insured enrollment was calculated from the Current Population Survey (CPS), based on the proportion of non-elderly residents with private insurance coverage. The CPS estimates were then adjusted with information from the Medical Expenditure Panel Survey (MEPS) on the usual duration of lapses in private coverage. The distribution of the privately insured across regions in Maryland was estimated using Maryland's Behavioral Risk Factor Surveillance System (BRFSS) data.

Private Sector: HMO

Private-sector HMO expenditures were developed by aggregating data from the 2001 annual statements submitted by Maryland HMOs to the MIA. This expenditure estimate was then adjusted upward to account for (1) self-insured expenditures for select services (such as vision and dental care) that are often "carved out" of HMO benefits by employers who provide these

benefits to their employees under a separate self-funded arrangement and (2) expenditures for Maryland residents whose coverage is provided under out-of-state auspices and is therefore not included in Maryland group contracts. Neither type of spending is captured directly by official HMO filings with the MIA. Aggregate expenditures were then distributed to regions based on InterStudy data and plan enrollment information. The service-specific spending levels developed for this effort from the Medical Care Data Base (MCDB) and the HSCRC Payer Differential Accounts were used to allocate total expenditures to service categories.

Out-of-Pocket

The ratio of OOP to total expenditures for specific services categories in Maryland statewide was assumed to be the same as what is reported in the NHE accounts for personal health expenditures. These proportions were applied to total regional expenditures (calculated as the sum of the Medicare, Other Government, and Private Coverage columns of the SHEA, by region) in order to develop estimates of total OOP costs regionally, with respect to variation in the regional payer and service category mix.